No.



# THIR UNITED STATES OF AMERICA

TO ALL TO WHOM THESE: PRESENTS; SHALL, COME;

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LILEUS, THERE HAS BEEN PRESENTED TO THE

## Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR PORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE VEPURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT DEED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

#### *LETTUCE*

'Challenger'

In Vestimone Merceri, I have hereunto set my hand and caused the seal of the Mant Bariety Protection Office to be affixed at the City of Washington, D.C. this seventh day of April, in the year two thousand and eight.

Aura

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Commissioner Plant Variety Protection Office Agricultural Marketing Service Edmand Johnson

of Agriculture

(See reverse for instructions and information collection burden statement,

GENERAL INSTRUCTIONS: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E, F; (3) for a tuber reproduced variety, verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; and (4) payment by credit card or check drawn on a U.S. bank for \$4,382 (\$518 filing fee and \$3,864 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice). NEW: With the application for a seed reproduced variety or by direct deposit soon after filing, the applicant must provide at least 3,000 viable untreated seeds of the variety per se, and for a hybrid variety at least 3,000 untreated seeds of each line necessary to reproduce the variety. Partial applications will be held in the PVPO for not more than 90 days; then returned to the applicant as un-filed. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. DO NOT use masking materials to make corrections. If a certificate is allowed, you will be requested to send a payment by credit card or check payable to "Treasurer of the United States" in the amount of \$768 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

**Plant Variety Protection Office** 

Telephone: (301) 504-5518

FAX: (301) 504-5291

General E-mail: PVPOmail@usda.gov

Homepage: http://www.ams.usda.gov/science/pvpo/PVPindex.htm

#### SPECIFIC INSTRUCTIONS:

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and provide evidence that the permanent name of the application variety (even if it is a parental, inbred line) has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: U.S. Department of Agriculture, Agricultural Marketing Service, Livestock and Seed Programs, Seed Regulatory and Testing Branch, 801 Summit Crossing Place, Suite C, Gastonia, North Carolina 28054-2193 Telephone: (704) 810-8870. http://www.ams.usda.gov/lsg/seed.htm.

#### ITEM

19a. Give:

- (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
- (2) the details of subsequent stages of selection and multiplication;

(3) evidence of uniformity and stability; and

- (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
  - (1) identify these varieties and state all differences objectively;
  - (2) attach replicated statistical data for characters expressed numerically and demonstrate that these are clear differences; and
  - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- . 19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
- If "Yes" is specified (seed of this variety be sold by variety name only, as a class of certified seed), the applicant MAY NOT reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
- 23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
- 24. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.
- 22. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)
- 23. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)
- 24. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice

To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is

## Exhibit A - Origin & Breeding History

Challenger originated from a hand pollinated cross between the variety King Henry and a plant selected from a private breeding line CVS RH98a. CVS RH98a was given to Tanimura and Antle personnel for trialing. The cross was made by Tanimura & Antle personnel using King Henry as the Female parent and CVS RH98a as the Male parent. The cross was made in 1997. The F1 seed was planted in the greenhouse in 1997 and the seed was harvested in December 1997. The F2 seed was planted in Salinas, California in 1998. The progeny was observed and several plants were selected based on phenotypic traits such as large size, blistered leaf surface and thick leaves. The selected plants were allowed to reproduce. Seed was harvested from the selected plants and they were planted in Huron, California in the Fall of 1998. The progeny was observed and 3 plants were selected based on size, leaf surface and thickness. The selected plants were removed and taken to the greenhouse where they were allowed reproduce. Seed was harvested from the selected plants and was planted in Salinas, California in March of 1999. The progeny was observed and 2 plants were selected based on the desired phenotypes of plant size, leaf surface as well as early maturity. The selected plants were allowed to reproduce. The seed was harvested and planted in Huron, California in the Fall of 1999. The progeny was observed and 4 plants were selected from the #2 plant based on size, maturity and leaf surface. The plants were removed from the field and taken to the greenhouse where they were allowed to reproduce. Seed was harvested and planted in Salinas, California and Huron, California in 2000. Progeny from the #2 planted selected had the desired phenotypic traits of plant size, color, leaf surface, thickness and early maturity. Seed was increased in 2002 and an extensive trialing program followed.

Challenger has been observed for four generations on increases from 2002 through 2005 of reproduction and during the seed increases and is stable and uniform. No variants are observed.

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## **Exhibit B - Statement of Distinctness**

Challenger is a Romaine variety that is most similar to King Henry. It differs from King Henry in several ways. The core length in Challenger is longer than King Henry. See Table A and B. The plant weight of Challenger is greater than that of King Henry. See Table A and B. Challenger is faster to mature than King Henry as noted in Exhibit C.

Planting Date of 9/01/04 in Huron, California

	Weight (gm)	710	3	3 740	0	6	9			705	6 710	1 725	740	6 735	3 700	715	0 760			3 720		9 740	0 710		2 735	-	8 723.8	3 16.601	1000
King Henry	Core Length (cm)	9.	6	3.	4	3.	4			e e	3.6		4			3,4				3.3			5.0			60	3.768	0.493	Weight 14,2325
	Plant Height (cm)	30	29	28	29	29	29	30	28	28	28	28	29	28	29	29	27	27	30	28	28	28	58	27	<u> </u>	58	28.44	0.917	1,000
	Weight (gm)		830	815	795	810	805	780	795	745	800	810	835	820	815	780	800	810	795	840			820	835	760	795	908	23.629	Core Length 20.1263
Challenger	Core Length (cm)		6.3	7.0	6.2	5.6	6.5	6.4	6.3	7.1	6.4	6.7	6.3	7.1	7.6	6.4	6.3	6.5	6.0	6.3	7.2	6.5	5.6	6.5	6.5	9.9	6.48	0.459	33277 - 177 - 2327 - 1
	Plant Height (cm)	33	30	29	33	31	32	31	33	33	32	31	31	31	33	32	32	32	31	31	33	33	32	32	33	32	31.84	1.068	Plant Height 12.0814
:	Plant #	•	2	3	4	ß	9	7	8	6	10	<u> </u>	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Average	std	Ttest

Planting Date of 9/20/04 in Yuma, Arizona

, , , , ,	Challenger			King Henry	
Plant Height (cm)	Core Length (cm	Weight (gm)	Plant Height (cm)	Core Length (cm)	Weight (gm)
ř				3.7	740
3		068	93	3.6	740
3.	2 5.1	885	31	3.5	755
33		840	30	3.7	715
33	3,	098	29	3.4	730
33		845	29	4.0	725
33	3.9	840	27	3.6	715
Š.		385	29	3.5	740
8	1 5.0	830	29	3.6	780
Æ		098	52	3.4	700
3		795	30	3.3	720
33		082	30	3.7	725
35.		840	28	3.5	745
Ö	3] 5.0	830	29	0.6	730
ř		840	53	3.9	710
Ř		840	29	3.2	745
č	4.5	855	28	4.0	0/2
ඊ		870	30	ල. හ	765
හි	3.9	840	30	3.6	710
ઝ	3 4.1	820	28	3.7	735
33		815	28	3.9	735
3,	2 4.5	820	27	4.0	720
35		845	28	3.1	715
ඊ	4	800	29	3.2	720
3		765	. 28	3.4	710
33.08	3 4.856	837.2	28.92	3.576	731.8
0.909	9] 0.449	30.825	26:0	0.285	20.201
	ī				
Plant Height		Core Length		Weight	
15.078		12.0348		14.2994	
8 555×104 - 20	eignificantly different	1 51- VULX299 5	einnifinanthy different	4 00000 A7	Significantly different

Statement of Distinctness
Challenger romaine lettuce has a significantly longer core length and possesses a significantly heavier weight than King Henry romaine lettuce.

REPRODUCE LOCALLY. Include form number and date on all reproductions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color,n ational origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washi ngton, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

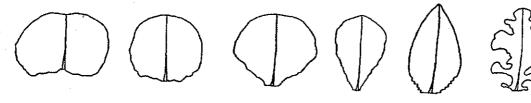
U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE **SCIENCE AND TECHNOLOGY PLANT VARIETY PROTECTION OFFICE** BELTSVILLE, MD 20705

**Exhibit C** 

**OBJECTIVE DESCRIPTION OF VARIETY** Lettuce (Lactuca sativa L.)

	·
3 Star Lettuce, LLC TEMPORARY OR EXPERIMENTAL DESIGNATION	Challenger
ADDRESS (Street and No. or RD No., City, State, Zip Code, and Country)	FOR OFFICIAL USE ONLY
P.D. Box 10489	PVPO NUMBER
	200500342
Salinas, CA 93912	
Die de la company de la compan	(e.g. 0 9 9 or 0 9 ) when number
Place the appropriate number that describes the varietal character in the boxes below. Place a zero in the first box	· • ———
is either 99 or less or 9 or less. Measured data should be the mean of an appropriate number (at least 20) of well spa	ace plants. Royal Horticultural Society of any
recognized color standard may be used to determine plant colors.	
The Location of the Test Area is: San Joaquin Valley of Calif . Color System Used:	in B
Southwest and Colorado KHS	136 P
	-
SPECIFIC VARIETIES USED FOR COMPARISON AS CHECK VARIETIES IN THIS APPLICATION: Use standard in	egional check varieties, which are adapted to
your area. One of the comparison varieties must be the most similar variety used in Exhibit B.	11004
Application Variety (a1) <u>Challenger</u> Most Similar Variety (c1) Kuna	HON INV
	<del>-</del>
Standard Regional Check Variety (c2)	
1. PLANT TYPE: (See List of Suggested Check Varieties on Page 8)	
01 = Cutting/Leaf 04 = Cos or Romaine 07 = Salinas Group 10 = Latin	•
02 = Butterhead 05 = Great Lakes Group 08 = Eastern (Ithaca) Group 11 = Other (Spe	ecify)
03 = Bibb 06 = Vanguard Group 09 = Stem	
(a1) 0 4 (c1) 0 4 (c2)	
2. SEED:	
(a1) COLOR (a1) LIGHT DORMANCY (a1)	HEAT DORMANCY
1 = White (Silver Gray) 1 = Light Required	1 = Susceptible
(c1) 2 = Black (Grey Brown) (c1) 2 = Light Not Required (c1) 1 (3 = Brown (Amber)	2 = Not Susceptible
(c2) (c2) (c2)	
2. COTVI EDON TO FOUNDTH LEAF STACE. NOTE: Desiride a select photograph of photograph of the fourth leaf from	m 20 day old goodling grown under entimal
<ol><li>COTYLEDON TO FOURTH LEAF STAGE: NOTE: Provide a color photograph or photocopy of the fourth leaf froi conditions.</li></ol>	in 20 day-old seedling grown under optimal
SHAPE OF COTYLEDONS: 1 = Broad 2 = Intermediate 3 = Spatulate	
	٦
(a1) [1] (c1) [1] (c2) [	·
क्षा क्ष	7
SHAPE OF FOURTH LEAF: (a1) (c2) (c2)	

### 3. COTYLEDON TO FOURTH LEAF STAGE: (continued)



- 1. Transverse oval
- 2. Round

- 3. Oval
- 4. Elongated
- 5. Lanceolate
- 6. Pinnately lobed

1 FNGTH/WIDTH	INDEX OF	ECHIETHI	ピスピ・1 ハハノン イハ

(a1) 2 6	(c1) (C1)	(c2)

AFICAL MARGIN.	2 = Crenate/Gnawed 3 = Finely Dentate	5 = Coarsely Dentate 6 = Incised	8 = Other (Specify) _		 -
	(a1)	Î	(c1)	(c2)	

BASAL WARGIN.	(Ose the options	of Apical Margin above)		·
# 1 T		(a1) 3	(c1) 3	(c2)

UNDULATION: 1 = Flat	2 = Slight	3 = Medium	4 = Marked	
	(a1)		(c1)	(c2)

GREEN COLOR:	2 = Light Green	4 = Dark Green	6 = Silver Green	7 - Gley Gleen
		(a1) 3	(c1) [3]	(c2)

### ANTHOCYANIN:

ROLLING:

DISTRIBUTION:	1 = Absent 2 = Margin Only	3 = Spotted 4 = Throughout	5 = Other (Specify)	
eta, eta	(a1)	1	(c1) <u>İ</u>	(c2)

CONCENTRATION:	1 = Light	2 = Moderate	3 = Intense	
er en	(a1)		(c1)	(c2)

eller i de la companya de la company	(a1)	ì	(c1)	(c2)
CUPPING:	1 = Uncupped	2 = Slight	3 = Markedly	
	(a1)	2	(c1) <b>2</b>	(c2)
DEEL EVING	1 - None 2	- Anical Margin	2 - Lateral Margins	

2 = Present

1 = Absent

4.	MATURE L	EAVES.	(Observe	Harvest-I	viature	Outer	Leaves
----	----------	--------	----------	-----------	---------	-------	--------

MATURE LEAVES (Observe H	arvest-Mature Outer Le	eaves)	·	
IOTE: Provide color photo of a h	narvest-mature leaf whi	ch accurately shows color	r and margin characteristics.	
MARGIN:				
INCISION DEPTH: (deepest penetration	1 = Absent/Shallow (E	Park Green Boston)	2 = Moderate (Vanguard)	3 = Deep (Great Lakes 659)
of the margin)	(a1)	2	(c1) <b>2</b>	(c2)
INDENTATION: (Finest	divisions of the margin)			
	1 = Entire (Dark 2 = Shallowly De 3 = Deeply Denta	Green Boston) ntate (Great Lakes 65) ate (Great Lakes 659)	4 = Crenate (Vanguard) 5 = Other (Specify)	
	(a1)	2	(c1) Q	(c2)
UNDULATIONS OF THE	1 = Absent/Slight 3 = Strong (Grea	(Dark Green Boston) 2 t Lakes 659)	= Moderate (Vanguard)	
	(a1)	2	(c1) 2	(c2)
GREEN COLOR:	1 = Very Light Gr 2 = Light Green (	een (Bibb) 3 = Mediun Minetto) 4 = Dark G		= Very Dark Green = Other (Specify)
	(a1)	4	(c1)	(c2)
ANTHOCYANIN:				
DISTRIBUTION:	1 = Absent 2 = Margin Only (		ed (California Cream Butter) ighout (Prize Head)	5 = Other (Specify)
	(a1)		(c1)	(c2)
CONCENTRATION:	1 = Light (Iceberg	2 = Moderat	e (Prize Head) 3 = Intense	e (Ruby) (c2)
SIZE:	1 = Small	2= Medium	3 = Large	
	(a1)	2	(c1) <b>2</b>	(c2)
GLOSSINESS:	1 = Dull (Vanguar (a1)	2 = Modera	te (Salinas) 3 = G (c1) 0 1	(c2) (Great Lakes)
	bsent/Slight (Salinas)	2 = Moderate (Vanguard)	3 = Strong (Prize Head)	<del>-   -</del>
	(a1)	ادان	(c1) <b>0</b> 2	(c2)
LEAF THICKNESS:	1 = Thin (a1)	2 = Intermediate	3 = Thick (c1)	(c2)
TRICHOMES: 1 = A	bsent (Smooth)	2 = Present (Spiny)	(c1) <b>0 1</b>	(c2)
PLANT:	4	·		
READ OF FRAME LEAVES:	1/A (a1)	cm	(c1) cm	(c2) cm

	ř						
5. PLANT: (continued)		NA					
HEAD DIAMETER: (Market Trimmed	with Single Cap I	.eaf)		,			
	(a1)	cm	(c1)	cm	(c2)	cm	
HEAD SHAPE:	1 = Flattened	3 = Spherical	5	= Non-Heading			
6 = Other (Specify)	2 = Slightly Fla	ttened 4 = Elongate					
	.(a1)	04	(c1)	04	(c2)		
		•					
HEAD SIZE CLASS:	1 = Small	2 = Medium	3=	= Large			
	(a1)	02	(c1)	03	(c2)		
HEAD PER CARTON:							
	(a1)	24	(c1)	ब्रामी	(c2)		
•	(,	42-1	(5.)	<u> </u>	()		
HEAD WEIGHT:	•				•		·
	<u>(</u> a1)	0806 g	(c1)	0724 g	(c2)	g.	
HEAD FIRMNESS:	1 = Loose	2 = Moderate	2-	= Firm		= Very Firm	
READ FINIMESS.		2 - Woderate				- very rum	
	(a1)		(c1)		(c2)	<u> </u>	
6. BUTT:		·		il =	Pai	nted	
SHAPE:	1 = Slightly Cor	cave 2 = Flat	3:	= Rounded	, .		
	(a1)	4	(c1)	4	(c2)		
MIDDID.	d — Flottonad /6	Caliana) O - Manda	untalis Dainad	l 2 – Draminan	the Dalas	ad (Creat Lakes 650)	
MIDRIB:	1 = Flattened (S	salinas) 2 = Wode	rately Raised	3 = Prominen		ed (Great Lakes 659)	
	(a1)	<u> </u>	(c1)	1	(c2)		
7. CORE:							
DIAMETER AT BASE OF HEAD:	(a1)	3 4 mm	(c1)	37 mm	(c2)	mm	
	(01)	7/A		<u> </u>	(02)	LL '''''	
RATIO OF HEAD DIAMETER/CO	RE DIAMETER:	NA					
	(a1)		(c1)		(c2)		
CORE HEIGHT FROM BASE OF	HEAD TO APEX	:					
	(a1)	65 mm	(c1)	38 mm	(c2)	mm	
	\				·/		<del>, , , , , , , , , , , , , , , , , , , </del>
8. BOLTING: (Give First Water Date: _	411107	) NOTE: First V	Vater Date is	the date seed first rec es equal the planting d	eives a	dequate moisture to g	jerminate. This
NUMBER OF DAYS FROM FIRST V	VATER DATE TO						
	(a1)		(c1)		(c2)		
	(α1)		(01)		( <del>)</del>		
BOLTING CLASS:	1 = Very Slow 2 = Slow	3 = Medium 4 = Rapid	5 = Very Rap	pid			
	(a1)	7	(c1)	习	(c2)		
	(a1 <i>)</i>		(c1)		(VZ)		
HEIGHT OF MATURE SEED STALK	:						
ST-470-1 (04-05) designed by the Plant Variety Pro	tection Office using	Microsoft Word 2003.		199			Page 4 of 9

(a1) cm (c1) cm (c2) cm  SPREAD OF BOLTER PLANT: (At widest point)  SPREAD OF BOLTER PLANT: (At widest point)  (a1)						·		
SPREAD OF BOLTER PLANT: (At widest point)  (a1)		(a1)	cm	(c1)	cm	(c2)	cm	
BOLTER LEAVES: 1 = Straight 2 = Curved	8. BOLTING: (continued)					•		
BOLTER LEAVES: 1 = Straight 2 = Curved (s1)  (s1)  (c1)  (c2)  (c2)  (c3)  MARGIN: 1 = Entire 2 = Dentate (s1)  (s1)  (c1)  (c1)  (c2)  (c2)  (c2)  (c3)  (c3)  (c4)  (c	SPREAD OF BOLTER PLANT: (A	at widest point)						
MARGIN: 1 = Entire 2 = Dentate   (a1)		(a1)	3 <b>(</b> ) cm	(c1)	4 cm	(c2)	cm	
(a1) (c1) (c2) COLOR: 1 = Light Green 2 = Medium Green 3 = Dark Green (a1) (a1) (c1) (c2) (c2) COLOR: 1 = Light Green 2 = Medium Green 3 = Dark Green (a1) (c1) (c2) (c2) COLOR: 1 = Absent 2 = Present (a1) (c1) (c2) (c2) COLOR: 1 = Absent 2 = Present (a1) (c1) (c2) (c2) COLOR: 1 = Absent 2 = Present (a1) (c1) (c2) (c2) COLOR: 1 = Absent 2 = Present (a1) (c1) (c2) (c2) COLOR: 1 = Absent 2 = Present (a1) (c1) (c2) (c2) COLOR: 1 = Absent 2 = Present (a1) (c1) (c2) (c2) COLOR: 1 = Absent 2 = Present (a1) (c1) (c2) (c2) COLOR: 1 = Absent 2 = Present (a1) (c1) (c2) (c2) COLOR: 1 = Absent 2 = Present (a1) (c1) (c2) (c2) COLOR: 1 = Absent 2 = Present (a1) (c1) (c2) (c2) COLOR: 1 = Absent 2 = Present (a1) (c1) (c2) (c2) COLOR: 1 = Absent 2 = Present (a1) (c1) (c2) (c2) (c2) COLOR: 1 = Absent 2 = Present (a1) (c1) (c2) (c2) COLOR: 1 = Absent 2 = Present (a1) (c1) (c2) (c2) COLOR: 1 = Absent 2 = Present (a1) (c1) (c1) (c2) (c2) COLOR: 1 = Absent 2 = Present (a1) (c1) (c1) (c2) (c2) COLOR: 1 = Absent 2 = Present (a1) (c1) (c1) (c2) (c2) COLOR: 1 = Absent 2 = Present (a1) (c1) (c1) (c2) (c2) COLOR: 1 = Absent 2 = Present (a1) (c1) (c1) (c2) (c2) COLOR: 1 = Absent 2 = Present (a1) (c1) (c1) (c2) (c2) (c2) (c2) (c2) (c2) (c2) (c2	BOLTER LEAVES: 1 = Ste			(c1)	1	(c2)		
BOLTER HABIT:  TERMINAL INFLORESCENCE: 1 = Absent 2 = Present  (a1)	MARGIN: 1 = Entire 2 = De	ſ	1	(c1)	1	(c2)		
TERMINAL INFLORESCENCE: 1 = Absent	COLOR: 1 = Light Green	Į.	<del>-</del> -	(c1)	3	(c2)		
LATERAL SHOOTS:  1 = Absent	BOLTER HABIT:	•						
LATERAL SHOOTS:  1 = Absent (a1)	TERMINAL INFLORESCENCE	1 = Absent	2 = Present	Γ				
BASAL SIDE SHOOTS:  1 = Absent		(a1)	1	(c1)	<u>a</u>	(c2)		
9. MATURITY: (earliness of harvest-mature head formation)  NOTE: Complete this section for at least one season.  SEASON APPLICATION VARIETY No. of Days' No. of D	LATERAL SHOOTS:	-		(c1)	2	(c2)		
NOTE: Complete this section for at least one season.    SEASON	BASAL SIDE SHOOTS:	Γ	ent 2 = Present	(c1)		(c2)		
SEASON APPLICATION VARIETY No. of Days¹ No.	•		n)				-	
Spring Date (s) and Location (s):  Spring: Date (s) and Location (	-		MOST SIMIL AD VA	DIETV	STANDARD	FGIONA	L CHECK VARIETY	
Spring Summer  Fall  Winter  First Water Date to Harvest  Give Planting Date(s) and Location(s):  Spring:  Summer:  Fall:  OTHERMARY REGIONS OF ADAPTATION (tested and proven adapted):  0 = Not Tested 1 = Not Adapted 2 = Adapted  Southwest (CA and/or AZ desert)  West Coast  Total Carter  West Coast  Total Carter  West Coast  Total Carter  Northeast	1		No. of Days		JIANDANDN			
Fall  Winter  First Water Date to Harvest  Give Planting Date(s) and Location(s):  Spring:  DISDY - HUND:  QUITTON  Summer:  Fall:  Winter:  10. ADAPTATION:  PRIMARY REGIONS OF ADAPTATION (tested and proven adapted):  0 = Not Tested 1 = Not Adapted 2 = Adapted  Southwest (CA and/or AZ desert)  West Coast  Northeast	Spring 12	<u> </u>	125					
Winter  First Water Date to Harvest  Give Planting Date(s) and Location(s):  Spring:  Summer:  5 2005 Center, Olorado.  Fall:  9 104 Hurn California  Winter:  10. ADAPTATION:  PRIMARY REGIONS OF ADAPTATION (tested and proven adapted):  0 = Not Tested 1 = Not Adapted 2 = Adapted  Southwest (CA and/or AZ desert)  West Coast  Northeast		<u>D</u>   _	14					
First Water Date to Harvest  Give Planting Date(s) and Location(s):  Spring: DIDDH Hum (Altfornia)  Summer: 5 DLOD Center, Wold Control  Fall: 9 OF ALAPTATION:  PRIMARY REGIONS OF ADAPTATION (tested and proven adapted):  0 = Not Tested 1 = Not Adapted 2 = Adapted  Southwest (CA and/or AZ desert)  West Coast  Northeast	Fall 0	0	109	,				
Give Planting Date(s) and Location(s):  Spring: 12 15 04 - Hunn California  Summer: 5 2605 Center Colorado.  Fall: 9 104 - Huron California  Winter: NOT Adapted  10. ADAPTATION:  PRIMARY REGIONS OF ADAPTATION (tested and proven adapted):  0 = Not Tested 1 = Not Adapted 2 = Adapted  Southwest (CA and/or AZ desert)  West Coast  Northeast			· ·					
Winter:  10. ADAPTATION:  PRIMARY REGIONS OF ADAPTATION (tested and proven adapted):  0 = Not Tested 1 = Not Adapted 2 = Adapted  Southwest (CA and/or AZ desert)  West Coast  Northeast	Give Planting Date(s) and Location(s)  Spring: 12 15 04  Summer: 6 2 0 05	- Hunn Cente - Huro	Californ Coloradi n. Californ	na D. Na				
PRIMARY REGIONS OF ADAPTATION (tested and proven adapted):  0 = Not Tested	· · · · · · · · · · · · · · · · · · ·	dapted				<del></del>		
0 = Not Tested 1 = Not Adapted 2 = Adapted  Southwest (CA and/or AZ desert)  West Coast  Northeast		TATION 44-						
Southwest (CA and/or AZ desert)  West Coast  Northeast	And the second of the second o		roven adapted):					
	Southwest (CA and/or AZ d	m			7	5y)(1	olorado	

10.	ADAPTATION: (Continued)					
SE	ASON:			1		
	2 Spring (Area Hunn U	<u>()</u> Fa	all (Area SUH)	iwest_	)	
	D Summer (Area Profer	w [] w	inter (Area		)	
	<u> </u>					
	GREENHOUSE: 0 = Not Tes	•	2 = Adapted			
	SOIL TYPE: 1 = Mineral	2 = Organic	3 = Both			
11.	VIRAL DISEASES:	÷				
	1 = Immune 3 = Resistant 5	= Moderately Resistant/Modera	tely Susceptible 7 = 5	Susceptible	9 = Highly Susceptible	
	Big Vein	(a1) T	(c1) 7	(c2)		
	Lettuce Mosaic	(a1)	(c1) 7	(c2)		
	Cucumber Mosaic	(a1) <b>7</b>	(c1) <b>7</b>	(c2)		
	Tomato Bushy Stunt, cause of dieback	(a1) 7	(c1) <b>7</b>	(c2)		
	Turnip Mosaic	(a1) T	(c1) <b>7</b>	(c2)		
	Beet Western Yellows	(a1) T	(c1) <b>7</b>	(c2)		
	Lettuce Infectious Yellows	(a1) T	(c1) <b>7</b>	(c2)		
	Other (Specify)	_ (a1)	(c1)	(c2)		
		***************************************				
12.	FUNGAL/BACTERIAL DISEASES:	Made and the Process of the Control				
		= Moderately Resistant/Modera		Susceptible	9 = Highly Susceptible	
	Corky Root Rot (Races:	_) <sup>(a1)</sup>	<sup>(c1)</sup> <b></b>	(c2)		
	Dayway Milday	(4) [T	<b></b>			
-	Downy Mildew (Races:	(a1)	(c1)	(c2)		
	Powdery Mildew	(a1) <b>7</b>	(c1)	(c2)		
	Sclerotinia Drop	(a1) 1	(c1) <b>7</b>	(c2)		
	Bacterial Soft Rot	(a1)	(c1)	(c2)		
	(Pseudomonas spp. and others)	[]				
	Botrytis (Grey Mold)	(a1)	(c1)	(c2)		
	Verticillium Wilt	(a1)	(c1)	(c2)		
	Bacterial Leaf Spot	(a1)	(c1)	(c2)		
	Anthracnose	(a1)	(c1)	(c2)		
	Other (Specify)	_ (a1)	(c1)	(c2)		
13.	INSECTS:					
	1 = Immune 3 = Resistant 5 =	Moderately Resistant/Moderate	tely Susceptible 7 = S	Susceptible	9 = Highly Susceptible	
	Cabbage Loopers	(a1)	(c1)	(c2)		
	Root Aphids	(a1)	(c1) (c1)	(c2)		
	Green Peach Aphid	(a1) <u> </u>	(c1) <b></b>	(c2)		
	Lettuce Aphid	(a1)	(c1)	(c2)		
		-	•	. ,		

				2005003	Exhibit C (Lettuce)
	Pea Leafminer Other (Specify)	(a1) (a1)	(c1) (c1)	(c2) (c2)	
14.	PHYSIOLOGICAL STRESSES:				
	1 = Immune 3 = Resistant	5 = Moderately Resistant/	Moderately Susceptible	7 = Susceptible 9 = Hi	ghly Susceptible
	Tipbum	(a1) <u>5</u>	(c1) <u>5</u>	(c2)	
	Heat	(a1) <u> </u>	(c1) <u>5</u>	(c2)	
	Drought	(a1)	(c1)	(c2)	
	Cold	(a1)	(c1) <u> </u>	(c2)	
-	Salt	(a1)	(c1)	(c2)	
	Brown Rib (Rib Discoloration, Rib Blight)	(a1)	(c1)	(c2)	
	Other (Specify)	(a1)	(c1)	(c2)	,
15.	POST HARVEST STRESS:				
	1 = Immune 3 = Resistant	5 = Moderately Resistant/	Moderately Susceptible	7 = Susceptible 9 = Hi	ghly Susceptible
	Pink Rib	(a1)	(c1)	(c2)	
	Russet Spotting	(a1)	(c1)	(c2)	
	Rusty Brown Discoloration	(a1)	(c1)	(c2)	
	Internal Rib Necrosis (Blackheart, Grey Rib, Grey Streak)	(a1)	(c1)	(c2)	
	Brown Stain	(a1)	(c1)	(c2)	
16.	BIOCHEMICAL OR ELECTROPHORE	ETIC MARKERS:			

#### 17. COMMENTS:

### SUGGESTED CHECK VARIETIES

1 Cutting/Leaf . 2 Butterhead 3 Bibb

4 Cos or Romain5 Great Lakes Group

6 Vanguard Group 7 Salinas Group

8 Eastern Group 9 Stem 10 Latin CHECK VARIETY
Waldmann's Green
Dark Green Boston
Bibb
Parris Island
Great Lakes 659-700
Vanguard
Salinas
Ithaca
Celtuce

Little Gem

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# Exhibit D

Challenger has a more upright growth habit than the variety King Henry. The butt shape of Challenger is more pointed than rounded. Challenger will close in or cup in at the top sooner than King Henry.

# Table A

Planting date of 9-1-04 in Huron, California. Maturity Challenger 11-4, King Henry 11-8.

Challenger
------------

Plant	Plant	Core	Core	
#	Height	Length	Diameter	Weight
1	33	6.1	3.5	845
2	30	6.3	3.4	830
3	29	7.0	3.6	815
4	33	6.2	3.4	795
5	31	5.6	3.0	810
6	32	6.5	3.3	805
7	31	6.4	3.2	780
8	33	6.3	3.1	795
9	33	7.1	3.3	745
10	32	6.4	3.6	800
11	31	6.7	3.7	810
12	31	6.3	3.0	835
13	31	7.1	3.6	820
14	33	7.6 <sup>-</sup>	3.5	815
15	32	6.4	3.4	780
16	32	6.3	3.5	800
17	32	6.5	3.2	810
18	31	6.0	3.3	795
19	31	6.3	3.1	840
20	33	7.2	3.2	815
21	33	6.5	3.4	800
22	32	5.6	3.6	820
23	32	6.5	3.7	835
24	33	6.5	3.3	760
25	32	6.6	3.2	795
	32	6.5	3.4	806

Kir	ıa	Н	e.	n	rv	7
			-		. ,	

	King Henry						
	Plant	Plant	Core	Core			
	#	Height	Length	Diameter	Weight		
	1	30	3.2	3.4	710		
	2	29	3.3	3.4	725		
	3	28	3.3	3.9	740		
	4	29	4.0	3.3	715		
	5	29	3.9	3.2	750		
	6	29	4.6	4.0	700		
	7	30	4.3	4.1	740		
	8	28	4.0	3.4	745		
	9	28	3.4	3.6	705		
	10	28	3.6	3.4	710		
	11	28	4.1	4.2	725		
	12	29	4.4	3.4	740		
	13	28	3.6	3.7	735		
	14	29	3.3	3.9	700		
	15	29	3.4	3.8	715		
	16	27	4.0	3.4	760		
	17	27	4.2	4.1	710		
	18	30	4.0	4.0	725		
	19	28	3.3	3.2	720		
	20	28	3.5	3.9	715		
	21	28	3.9	3.7	740		
	22	29	5.0	4.1	710		
-	23	27	3.6	3.3	720		
	24	27	3.2	3.6	735		
	25	29	3.1	3.8	705		
		28	3.8	3.7	724		

# <u>Table B</u>

Planting date of 9-20-04 in Yuma, Arizona. Maturity Challenger 11-21 and King Henry 11-25.

Challeng	er
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Challenger						
Plant	Plant	Core				
#	Height	Length	Weight			
1	35	5.4	840			
2	34	5.0	890			
3	32	5.1	885			
4	32	4.9	840			
5	33	4.7	860			
6	33	4.8	845			
7	31	3.9	840			
8	34	4.9	885			
9	34	5.0	830			
10	33	5.1	860			
11	33	5.5	795			
12	32	5.4	780			
13	32	5.4	840			
14	33	5.0	830			
15	33	4.7	840			
16	33	4.9	840			
17	34	4.5	855			
18	34	5.1	870			
19	34	3.9	840			
20	33	4.1	820			
21	33	4.7	815			
22	32	4.5	820			
23	32	4.4	845			
24	34	5.1	800			
25	33	5.4	765			
	33	4.9	837			

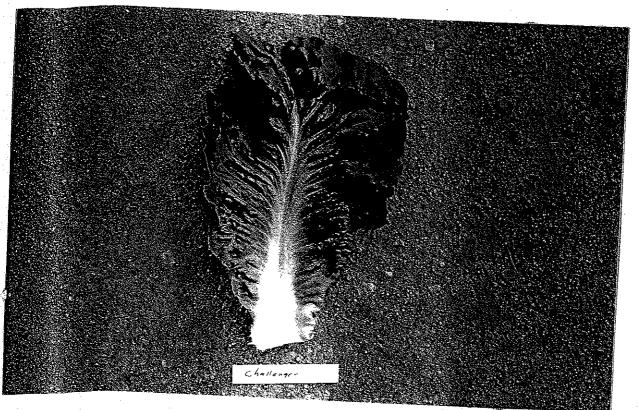
King F	lenrv
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	Killy	пенту	
Plant #	Plant	Core	
	Height	Length	Weight
1	29	3.7	740
2	30	3.6	740
3	31	3.5	755
4	30	3.7	715
5	29	3.4	730
6	29	4.0	725
7	27	3.6	715
8	29	3.5	740
9	29	3.6	780
10	29	3.4	700
11	30	3.3	720
12	30	3.7	725
13	28	3.5	745
14	29	3.0	730
15	29	3.9	710
16	29	3.2	745
17	28	4.0	770
18	30	3.9	765
19	30	3.6	710
20	28	3.7	735
21	28	3.9	735
22	27	4.0	720
23	28	3.1	715
24	29	3.2	720
25	28	3.4	710
	29	3.6	732



Challenger





REPRODUCE LOCALLY. Include form number and edition date on all	ORM APPROVED - OMB No. 0581-0055		
U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE  EXHIBIT E  STATEMENT OF THE BASIS OF OWNERSHIP	Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).		
1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION	3. VARIETY NAME	
	OR EXPERIMENTAL NUMBER	o. Ville i i ville	
3 STAR LETTUCE, LLC		CHALLENGER	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)	5. TELEPHONE (Include area code)	6. FAX (Include area code)	
P.O. BOX 10489	(831) 675-3790	(831) 675-3826	
SALINAS, CA 93912			
	2005003	42	
8. Does the applicant own all rights to the variety? Mark an "X" in the	e appropriate block. If no, please expla	in. YES NO	
9. Is the applicant (individual or company) a U.S. national or a U.S. b	pased company? If no, give name of co	ountry. YES NO	
10. Is the applicant the original owner? YES NO If no, please answer one of the following:			
a. If the original rights to variety were owned by individual(s), is ( YES  b. If the original rights to variety were owned by a company(ies) YES	NO If no, give name of count , is (are) the original owner(s) a U.S. bas  NO If no, give name of countr	ry sed company? 'Y	
11. Additional explanation on ownership (Trace ownership from origin	nal breeder to current owner. Use the re	everse for extra space if needed):	
THE VARIETY IS OWNED BY 3 STAR LETTUCE WHICH IS OF CALIFORNIA ON MAY 18, 2001.	S A LLC FORMED IN CALIFORNIA	AND FILED WITH THE STATE	
THE VARIETY CHALLENGER WAS ACQUIRED FROM THE TANIMURA AND ANTLE, A SALINAS BASED LETTUCE GOLD. THE TANIMURA AND ANTLE PROGRAM WAS ASSICAND RIGHTS BECOMING THE PROPERTY OF 3 STAR LET BETWEEN THE TWO COMPANIES.	ROWER/SHIPPER, AND COMMERO GNED TO 3 STAR LETTUCE IN 200	CIALIZED BY 3 STAR LETTUCE, 2, WITH ALL BREEDING LINES	
PLEASE NOTE:			
Plant variety protection can only be afforded to the owners (not licens	sees) who meet the following criteria:	·	
If the rights to the variety are owned by the original breeder, that pronational of a country which affords similar protection to nationals of a country which affords similar protection.	erson must be a U.S. national, national of the U.S. for the same genus and speci	of a UPOV member country, or es.	
2. If the rights to the variety are owned by the company which employ nationals of a UPOV member country, or owned by nationals of a genus and species.	yed the original breeder(s), the company country which affords similar protection t	must be U.S. based, owned by o nationals of the U.S. for the same	
3. If the applicant is an owner who is not the original owner, both the	original owner and the applicant must m	eet one of the above criteria.	
The original breeder/owner may be the individual or company who did Act for definitions.	rected the final breeding. See Section 4	1(a)(2) of the Plant Variety Protection	
According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, control number. The valid OMB control number for this information collection is 0581-0055. including the time for reviewing the instructions, searching existing data sources, gathering a	The time required to complete this information collect	tion is estimated to average 0.1 hour per response.	

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